

Claims.

1. An optically active film composite, for use in a transaction card, and which includes a transparent polymeric film substrate having a hard coat layer on at least one surface thereof, the hard coat layer comprising a resin binder having a thickness of less than 6 microns and a pencil hardness of at least 2H, and including 7-8% by weight of nanoparticles of Lanthanum Hexaboride .
2. A card as claimed in Claim 1 wherein the hard coat layer also includes a further metallic compound absorbing light having a wavelength in the range of 1000-2500nm.
3. A card as claimed in Claim 1 wherein the composite has a VLT (visible light transmission)of about 50%, and blocks the near IR transmission to less than 10%.
4. A card as claimed in Claim 1 wherein the resin binder is a uv curable acrylate resin.
5. A card as claimed in Claim 1 wherein the polymeric film substrate comprises polyethyleneterephthalate (PET) film.
6. A card as claimed in Claim 5 wherein the PET film may include at least one uv radiation absorbing material to block out substantially all uv radiation to less than 1% weighted UV transmission.
7. A card as claimed in Claim 1 wherein the film substrate

may be dyed to a desired colour.

8. A card as claimed in Claim 1 wherein the film substrate has a hard coat layer on both surfaces of said film.

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9. A card as claimed in Claim 8 wherein the each of said hard coat layers is over layered by at least one further polymeric film layer.

10 10. A card as claimed in Claim 9 wherein each said hard coat layer is over layered by a first layer of polymeric film by adhesive lamination, and by a second outer film layer which is hot laminated to the first layer.

15 11. A card as claimed in Claim 8 wherein each further polymeric film layer comprises polyvinylchloride (PVC) film.

12. A card as claimed in Claim 5 wherein the PET film substrate has a hard coat layer on both surfaces of said
20 film, and each hard coat layer is over layered by a PVC film layer adhered to the hard coat layer using a pressure sensitive adhesive with a further outer PVC layer laminated over said adhered PVC film layer by hot lamination.

25 13. In a transaction card, an optically active film composite comprising a PET film substrate having both surfaces thereof coated with a layer of resin having a thickness of less than 6 microns, the resin including nanoparticles of Lanthanum

hexaboride absorbing light having a wavelength in the range of 700-1100 nm, the composite having a VLT of about 50% and a % transmission of light at 940nm wavelength of no more than 10%.

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14. A transaction card comprising an optically active film composite including a transparent polymeric film substrate having both surfaces thereof coated with a layer of resin having a thickness of less than 6 microns and containing less
10 than 10% by weight of nanoparticles of Lanthanum hexaboride absorbing light having a wavelength in the range of 700-1100 nm, each hard coat layer being overlayered by at least one further polymeric film layer so that each said hard coat layer is sandwiched between the substrate and said further
. 15 film layer.

15. A transaction card comprising a film composite including a PET film substrate having both surfaces thereof coated with a layer of hardcoat resin, each hard coat layer being
20 overlayered by a first PVC film layer which in turn is overlayered by a second PVC film layer so that each said hard coat layer is sandwiched between the PET substrate and said first PVC film layer.

25 16. A transaction card as claimed in Claim 15 wherein ~~the~~ hard coat layer contains nanoparticles of Lanthanum boride.

17. A transaction card as claimed in Claim ~~16~~ wherein the

first PVC layer is adhesive laminated to the adjacent hardcoat and the second PVC layer is over layer therto by hot lamination.

- 5 18. A transaction card as claimed in Claim 16 wherein the PET film is dyed to a colour which reacts with any hardcoat coloration to produce a desired colour.

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